

552, 570

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number  
**WO 2004/090065 A1**

- (51) International Patent Classification<sup>7</sup>: **C09K 3/18**, C09D 5/02, 5/00
- (74) Agent: **GRIFFITH HACK**; GPO Box 4164, Sydney, New South Wales 2001 (AU).
- (21) International Application Number: PCT/AU2004/000462
- (22) International Filing Date: 8 April 2004 (08.04.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
2003901735 11 April 2003 (11.04.2003) AU
- (71) Applicant (for all designated States except US): **UNISEARCH LIMITED** [AU/AU]; Rupert Myers Building, Gate 14, Barker St, UNSW, Sydney, New South Wales 2052 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ZHANG, Hua** [AU/AU]; School of Chemistry, University of New South Wales, Sydney, NSW 2052 (AU). **LAMB, Robert, Norman** [AU/AU]; School of Chemistry, University of New South Wales, Sydney, NSW 2052 (AU). **JONES, Ashley, Ward** [AU/AU]; School of Chemistry, University of New South Wales, Sydney, NSW 2052 (AU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DURABLE SUPERHYDROPHOBIC COATING

(57) Abstract: A method for forming a hydrophobic coating on the surface of a substrate comprising linking particulate material by polymer strands and cross-linking at least some of the polymer strands. The invention further relates to hydrophobic coatings comprising particles of a particulate material linked together and to a surface by polymer strands, wherein some of the polymer strands are cross-linked. The method of the invention can be used to form superhydrophobic coatings.

WO 2004/090065 A1